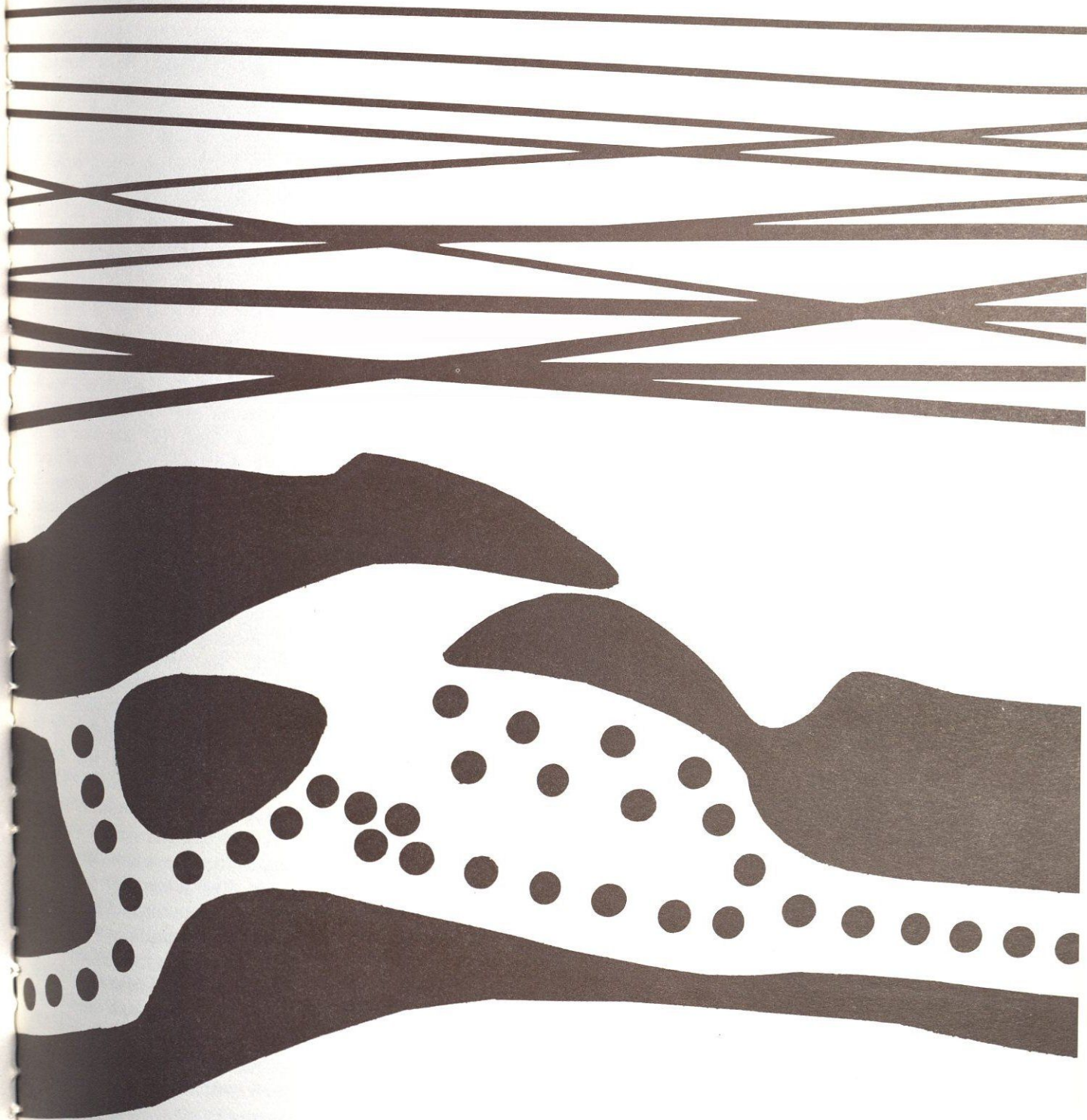


The HARPSIGORD



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HARPSICHORD

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THE COVER

Our cover, *The Landscape of the Inner Ear*, a collage designed by Art Director Edwin Golikoff, emphasizes two features on tuning (pages 13 & 18). The sharp tonal contrasts anticipate the aural effects of this activity.

2 — *The Harpsichord*

ACKNOWLEDGEMENTS

The International Society of Harpsichord Builders is proud to give special recognition to the following Contributing Members whose interest and generosity aid materially in the development and preservation of the instruments and music of the baroque period and assists in furthering the various projects and programs of the Society.

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BO FOR BAROQUE

by Hal Haney



GOOD NEWS FROM DONALD BOALCH!

Back in 1956, Donald Boalch of Oxford published the result of years of study and research in the backgrounds

and production of early harpsichord builders in a book entitled *Makers of the Harpsichord and Clavichord 1440-1840*. The book was rapidly purchased by serious students and libraries all over the world. In all too brief a time, the book was out of print. Libraries protected their copies jealously. At the public library in Denver, the Boalch book went under lock and key and a special signature form was needed just to examine the volume at the desk. Society members contacted *The Harpsichord* for help in locating this valuable reference work. We combed used book stores in most major cities with no results. We hired two professional "book finders" who had advertised in the *Saturday Review* that they guaranteed results. They searched for two years and gave up. We wrote to members in other parts of the world hoping to locate a stranded copy, but no luck. We offered \$35 per copy to anyone who would sell us their copy, but no one would part with it.

As the interest in harpsichords and clavichords increased, the interest in the Boalch book also increased. The letters and long-distance telephone calls kept arriving at the Society with distressing regularity. We suggested to a responsible New York publisher that he try to get rights to reprint, at least in the U. S. We know of several cases where the book was

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reproduced page by page by expensive Xerox and there was even talk of an underground movement to sell Xerox copies to those willing to pay up to \$50 each for them!

With the above as background, we are more than pleased about the news we have just received from I.H.S. member Donald Boalch. In a letter he told us:

"I am preparing a 2nd edition of my book *Makers of the Harpsichord and Clavichord 1440-1840*, which has now been out of print for several years.

"A number of members of our Society have already very helpfully sent me additions and corrections for the new edition; but there may well be others who know of instruments not recorded by me, or of changes of ownership, or of mistakes in my first edition.

"I should be very grateful if they would communicate their information to me at my private address:

Donald Boalch
4 Hill Top Road
Oxford, England

The Society urges anyone with additions or corrections to the Boalch book to forward these to him as soon as possible to the above address. (Air-mail is 20c per 1/2 ounce and the self contained airmail folders, sometimes called aerograms, are even less.) This is our opportunity to lend aid to a project which will help scholars for many, many years to come.

BACH INTERNATIONAL COMPETITION OFF-LIMITS TO HARPSICHORDISTS

In one of the strangest twists to come to light in some time, we learn that the Johann Sebastian Bach International Competition operated by the American Bach Foundation of Washington will not accept harpsichordists in their international Bach competition. Bachs' harpsichord music **must** be played on the piano!

When the Society received an announcement of the 11th annual J. S. Bach International Competitions to be held June 11-13, 1971 at Lisner Auditorium of George Washington University at Washington D. C., we

thought it would make an interesting news story for *The Harpsichord*. Especially since 1st prize is \$1000, 2nd prize \$500 and 3rd prize \$250. However, upon reading the rules and regulations rule two states "Open to piano students between 17 and 32 years of age", and later on the statement, "No exceptions whatever can be made to any of our rules and regulations" appears.

It seemed to me rather curious that if the competition was indeed actually a Bach competition, pianos would be required and harpsichords would be ineligible. It would seem more natural to be the other way around.

We learned that the Bach Foundation was founded and is presided over by Raissa Tselentis (Mrs. Paul A. Chadwell), a pleasant, hardworking and talented pianist and teacher who has studied in Athens, Berlin and the United States. She has been affiliated with the National Guild of Piano Teachers for many years. She has been on the faculty of Peabody Conservatory in Baltimore and, time permitting, teaches privately in her home in Washington. She founded the Competition 11 years ago, and during that time approximately 450 pianists have competed in the performance of the harpsichord works of J. S. Bach.

In an article written by Ylida Novik, published in the March-April 1970 issue of Piano Guild Notes, Austin, Texas, Miss Tselentis was quoted as saying that despite its growing popularity, the harpsichord was not an instrument of today, and since the piano was, and is readily available, pianos have been selected as the instrument for the competition.

Under the heading "Biography, Objectives and Accolades" the competition announcement states, "Although Bach did not write for the modern piano, the performance of his music should not be restricted to the authentic instruments . . ." Instead, they restrict his music to the piano.

All this would more or less indicate that the scarcity of harpsichords

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SYMPATHETIC VIBRATIONS

JACKS OF ALL MAKES

MASTERPIECES NONE

by Wallace Zuckermann

I am sitting here with a box of jacks in front of me. The box contain some forty different jacks of the various makers. Some are badly designed, some are well



designed, and some are just average. But there isn't a single jack, so far, made which combines the various essential and useful features a jack should have.

Let us first enumerate what these features are, and then see how the makers differ from the ideal. I would list the following essential features:

1. **Dimensions.** The jack should be slim enough to allow the most working space between strings, and narrow enough so that four sets can easily fit into a gap. The optimum measurements seem to be 5/32" thick and 1/2" wide.

2. **Damper.** By far the easiest damper arrangement is a slot into which the damper is clamped and in which it can be pulled up and down. No screws and no gluing is necessary. Burton's idea of moulding ridges into the damper slot to hold the damper tightly is a good one.

3. **Damper extension overhang.** By this I mean letting the damper slot extension stop before it widens the jack all the way down. The damper should take up the space of the jack slide walls; there is no need to make the entire jack wider just to accommodate the damper slot.

4. **Easy tongue insertion.** Both Burton with his "snap-in" tongue and

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WHY I PLAY "ORGAN MUSIC" ON THE HARPSICHORD

by E. Power Biggs



When we heard the noted organist E. Power Biggs playing Bach's "organ music" on the pedal harpsichord, we wondered if this was just a whim, or if he had some information about Bach's works that we hadn't read. We thought the latter might be true since Mr. Biggs has been studying Bach almost since his birth at Westcliff-on-Sea, Essex, England. He was educated at Hurstpierpoint College, Sussex, and the Royal Academy of Music in London. After giving numerous recitals in the large and historic cathedrals of England, he moved to the United States and became a naturalized American citizen in 1938. He won great success as soloist with prominent orchestras such as the Boston Symphony, the Chicago and Cincinnati orchestras and appeared at the Berkshire, Massachusetts Festival, the Bethlehem Bach Festival and concerts of the Library of Congress at Washington D. C. One of his most notable achievements was an historical series of recitals presenting Bach's complete organ works, which he gave first at the Germanic Museum of Harvard University and later at Columbia University. While it might seem that his studies and schedules would limit his work to the interpretation of ancient music, this is not so. He is an enthusiastic promoter of modern American composers and in Sunday broadcasts on the CBS network, he has presented, for the first time, many contemporary works specifically written for him by leading composers such as Sowerby, Piston, Harris, Hanson, Porter and others.

With this vast background and experience we thought that IHS member E. Power Biggs must know what he was doing. Also he recorded on Columbia Masterworks, the six Trio Sonatas of Bach on two long playing records MS 7124 and MS 7125. In addition to this he recorded a Columbia Album "Bach on the Pedal Harpsichord" MS 6804/MQ 790, on which he played the Passacaglia C minor, the "Great" G minor, Toccata and Fugue in D minor and other organ works.

We wrote to Mr. Biggs and asked if he would do a special article for *The Harpsichord* so we could all learn from his experiences. We soon discovered that he was in Europe, but through the kindness of Johanna Giwosky, our letter was forwarded to him and, despite his very full and difficult schedule, he consented to write for us.

His interesting and comprehensive article, follows:

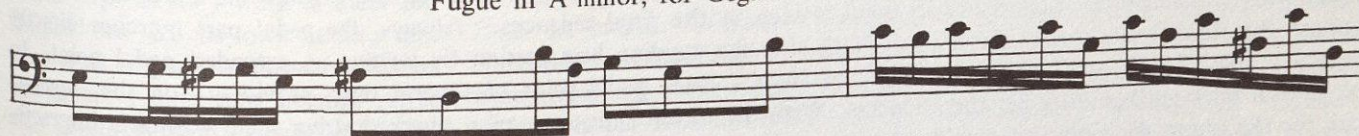
One of Johann Sebastian Bach's unique achievements was to create the Trio Sonata for a single player. Historically, a Trio Sonata had always implied three performers, with—possibly—a fourth to realize the continuo. Bach wrote the famous Six Trio Sonatas—"für zwey Claviere und Pedal"—to perfect the playing technique of his eldest son, Wilhelm Friedemann, who was an organist, and, therefore musically divisible into three parts—two independent hands and a pair of feet. The Trio Sonatas date from 1733, when Bach was forty-eight. They were published in the 19th century as part of the composer's organ literature, and have become familiar to music lovers through performance on that instrument. All writers on Bach, from Forkel and Pirro, to Parry and Schweitzer, have praised the beauty of the Sonatas, usually adding wry comment on the difficulty of their execution, which calls for considerable independence of hands and feet.

Though associated with the organ, the Sonatas are very different in structure to the greater part of Bach's organ music. They are closer to the instrumental concertos, both in their style and in their three movement design. In musical idiom they are unique. The three contrapuntal strands define the harmony perfectly. They complement yet never cover each other. Each voice is transparently audible. A four-voice organ fugue usually drops to two voices in the episodes, but the three lines of Bach's Trio Sonatas are never augmented or diminished. Bach's skill in creating "chamber music" for the organ (or was it for the pedal harpsichord?) was so complete that nothing comparable has been written since.

These Sonatas are particularly fascinating in the subtle and varied way by which Bach relates pure musical ideas to the characteristics—both advantages and limitations—of manuals and pedals. In an instrumental Trio Sonata, the 'cellist is relatively as agile as the violinist, and a bassoon can equal an oboe in running up and down a scale. Organists come equipped with ten independent fingers, but not, unfortunately, with ten separately usable toes!

In a vital way, the Sonatas are quite different to the organ works. In his organ fugues, Bach rarely uses a theme that is not playable "verbatim" on the pedals. Themes have a good deal of zig-zag motion, convenient to the two feet—left, right, left, right.

Fugue in A minor, for Organ.



But the Trio Sonatas themes are of a different "genre," and because of their more florid nature the themes cannot be transferred note-for-note to the pedals. So Bach deals realistically with the pair of feet available and evolves some interesting subject relationships. For example, in both the first and second movements of the first Trio Sonata, the second bar is quite impractical on the pedals. So only the identifying opening phrase is used for the bass:

SONATA 1
Movement 1

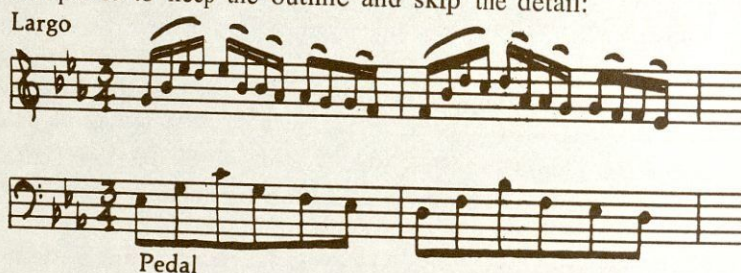


SONATA 1
Movement 2



Another technique is to keep the outline and skip the detail:

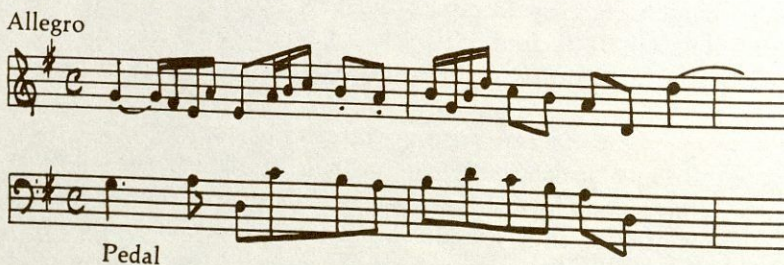
SONATA 2
Movement 2



SONATA 4
Movement 3



SONATA 6
Movement 3



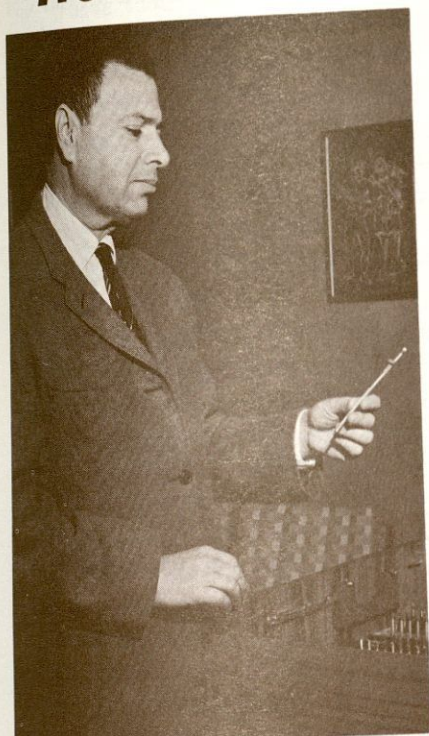
In addition to praising the poised musical beauty of the Sonatas, all writers on Bach's life have puzzled over the composer's intention for performance. What did Bach mean by the title "Für zwey Claviere und Pedal?" In Bach's day, harpsichords and clavichords, with pedals below, extending two or more octaves, were in common use. Practice at home—equally as beneficial as practice on the church organ—avoided the chill of winter and the cost of the organ pumper. It must be remarked, of course, that the pedal harpsichord is no mere practice instrument, for it is obvious that to add a pedal 'clavier' to a harpsichord extends the possibilities of an already uniquely vital musical instrument. One might say that the pedal harpsichord combines the natural vivacity of the harpsichord with something of the bass sonority of an organ.

Did Bach intend his Sonatas for Wilhelm Friedemann's use at home rather than at church—that is—primarily for the pedal harpsichord? There are numerous indications that this is so, and perhaps the strongest clue Bach had harpsichord characteristics in mind is seen in the final cadences. Always, the pedal part marches directly toward the final tonic chord. Never does Bach stop the striding bass motion by writing an extended pedal point. In several organ chorale preludes in trio form one finds a final pedal point of several bars, providing—on the organ—wonderful bass underpinning for the cadence. With the natural die-away of a plucked string such writing is impractical, for the diminishing support would leave the upper parts high and dry. The cadences, therefore, point strongly to the pedal harpsichord.

On the pedal harpsichord, Allegro movements generally sound best in quicker tempo. But—surprisingly—slow movements sound better in slower tempo than on the organ. The stringed instrument allows more opportunity to etch in detail, and ornaments may be clearly articulated on the pedals.

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Notes From A Traveling Harpsichordist



Victor Wolfram, harpsichordist and Prof of Music at Oklahoma State University tells us of his travels, studies and personal observations on his first tour.

by Victor Wolfram

September 1. This is the beginning of my sabbatical leave, the first that I have taken in more than two decades of college teaching. For nine months I am to be free of my professional duties at Oklahoma State University. The time will be devoted to the attempt to transform myself into a harpsichordist, after forty years of exclusive preoccupation with the piano, twenty-five of them spent at least in part as a concert pianist. I know that many pianists play the harpsichord very badly, thumping away with arm-weight inappropriate to the more delicate instrument and ignoring the problem of making the harpsichord expressive. I want to meet the harpsichord on its own terms, and play it as a genuine harpsichordist or not at all. I have nine months. After this gestation, will I emerge a harpsichordist?

September 10. The editor of Cimarron Review tells me that the mid-winter issue of this quarterly mag-

azine of arts and letters will contain an article that I submitted. I will need to take the illustrations to the photographer so that plates can be made. The article is a survey of some of the remarkable fallacies and misconceptions concerning the harpsichord that have been propounded by historians and musicologists during the nineteenth and early twentieth centuries.

October 3. I fly today from Oklahoma to Chicago, where I will spend a brief but intensive period of study with Robert Conant, a member of the faculty of Roosevelt University. Conant, who has been highly recommended to me, was a pupil of Kirkpatrick. Before joining the Roosevelt faculty, he taught at Yale University and served as Curator of the Yale instrument collection. He has an impressive history of concert successes in Europe and America, has made recordings for Columbia and Decca and has played continuo for the Pablo Casals Festival in Puerto Rico. There will be a certain amount of tension for me in this experience. For the first time since I completed my piano studies with Olga Samaroff in 1946 I will play once again the role of pupil instead of teacher.

Conant's charming wife Nancy drives me from my hotel to their home in a north-shore suburb. When we arrive, Conant — a friendly, youthful man with a large and flourishing moustache — is wrestling a harpsichord crate off an Air Freight truck with the help of the driver. Several college students from a nearby campus have been recruited to carry the instrument into the house and uncrate it. The harpsichord has just returned from its maker, William Dowd of Cambridge, Massachusetts, who has been repairing some minor injuries suffered in the vicissitudes of concert touring. Conant owns two Dowd harpsichords, as well as a small Challis now reserved for the use of his two small children, and a clavichord. Both

of the Dowds (one built this year, the other in 1965) are two-manual harpsichords based on an eighteenth-century French prototype. Both have a wonderful virile tone, each with its individual characteristics. The 1965 Dowd is more dark and fiery, the newer instrument somewhat lighter and reedier in tone.

Conant asks me to begin my lesson by playing something simple and cantabile — a Bach Invention. As I am about to play, he leans forward and interrupts me with an apprehensive expression on his face: "You know, some people seem meant to be harpsichordists and others not." After I play, I turn around. Conant is smiling. "Oh," he says, this is going to be fine." Perhaps, after all, I will be a harpsichordist.

We are to spend a good part of the next several days working together. Conant emphasizes for me the necessity of drawing from the instrument its most singing quality of tone, the importance of legato as a fundamental approach to the harpsichord, the subtleties of expressive nuance that can be suggested by varieties of articulation. His advice is greatly valuable, his personality completely warm and cordial. I look forward to my next visit with him several months from now.

October 8. Another article of mine has been accepted for publication, this one by High Fidelity magazine. If present schedules are maintained, it will appear in the June 1970 issue. In it, I trace the outlines of the twentieth-century revival of the harpsichord and discuss some of the notable harpsichord recordings that have been made. The article will probably offend those who prefer their harpsichord music colored by a constant kaleidoscopic shifting of registers; that's their hang-up, not mine. I wrote it the summer of 1969 when I knew less about the harpsichord than I do now, but I don't think I perpetrated

any serious errors.

November 7. I am traveling once more, this time to Dallas, Texas, where the renowned Dutch harpsichordist Gustav Leonhardt is lecturing and playing at Southern Methodist University. The sessions are held in an attractive wood-panelled concert hall, a part of the University's lavish new Fine Arts Center. Leonhardt is distinguished in appearance as well as in his accomplishments. He is tall, slender and somewhat frail, perhaps reflecting the ordeal of a recent serious illness. His command of the English language is excellent (as is his French and German) with no difficulty whatsoever in communication.

While we wait for Leonhardt to appear, Ronald Miller greets me. He has driven up from Houston, where he sells harpsichords, other Baroque instruments, books and music under the corporate name of Clavis Imports. Miller introduces me to Herschel Sands, who is President of the Houston Harpsichord Society. I have already had a telephone conversation and an exchange of correspondence with Sands, whose group of harpsichord enthusiasts will present me in a concert under their auspices in Houston on March 25, 1970. I am an old hand as a concert pianist, but this will be my first public appearance playing the harpsichord. Well, there has to be a first time. It is pleasant to have the companionship of Miller and Sands here in Dallas.

Leonhardt's first lecture is devoted to the harpsichord music of Louis Couperin, the lesser-known uncle of the famous "Couperin le Grand." We hear about the surprising discovery, only a few months ago, of an additional manuscript copy of music by Louis Couperin. A variety of illustrative suite movements is ably performed by two Southern Methodist University graduate students. J. Leonhardt stresses the need to search for the expressive content of the music. He advises a subtle lingering upon dissonances, a motion toward significant points of harmonic structure — in short, an exposition of the

shape of the phrase and the total form of the composition. These are familiar concepts to pianists, but are even more important for the harpsichord's restricted capacity for nuance.

In the evening, Leonhardt's recital presents French clavecin music. He is playing a harpsichord built this year in Germany by Rainer Schuetze. Based on an eighteenth-century French instrument by Dulcken, it has the traditional Baroque disposition of 8' and 4' registers on the lower manual and a second 8' register (with buff stop) on the upper manual. The registers are operated by hand stops and a sliding coupler. The upper manual also offers a lute stop, a register of jacks placed in a gap through the wrest plank, which produces an extremely nasal tone. (In his performance tonight, Leonhardt will not use the lute stop even once; in fact, he adds the 4' to the ensemble only at a few climatic moments.) In addition, this harpsichord has been equipped by Schuetze with a transposing mechanism for the upper manual, somewhat after the manner of early Flemish instruments, though the need for this device today would seem to be very slight.

I have heard this particular Schuetze harpsichord once before. It was built for the talented young harpsichordist James Tallis, whose unexpected and untimely death in the autumn of 1969 was a tragic shock. I met Tallis when he played a recital in Oklahoma City this past July. On that occasion, he played his spanking-new Schuetze in a large church auditorium, placing the instrument on a platform in the center of the room with the lid completely removed, the audience around him in a circle. Due to this placement, the tone had seemed frail, with the higher pitches particularly deficient. Tonight, however, the lid remains on the case of the instrument, which has been placed on the convention stage of a moderate-sized concert hall blessed with superb acoustics. Under these circumstances, the tone of the Schuetze is revealed as full-bodied and well balanced through-

out its range.

Leonhardt plays with great sensitivity and expressive power. This can be determined by hearing any of his numerous recordings, but no recording can ever equal the communicative force of a live performance. Of particular interest on the program are four pieces by Duphy, whose music remains virtually unplayed. Judging from Leonhardt's performance, it is eminently worthy of exploration.

The lecture the next morning is based largely on Leonhardt's book on Bach's *Die Kunst der Fuge*, though some new material is also included. Before I leave, I secure Leonhardt's permission to visit him next month at Harvard, where he will be in residence until he returns at Christmas to his native Holland.

November 22. I have had a welcome letter from the director of the Artists Series of Wake Forest University in Winston-Salem, North Carolina. I will play a harpsichord recital there on April 13. They will have to borrow an instrument for the occasion as they have none of their own and I have no facilities for taking my own harpsichord on tour with me. I may have to use a Sperrhake with the typical modern German disposition (no longer accepted as authentically Baroque) of the 4' on the upper manual. This will require a few changes in my registration. I will have to plan some compromise procedures.

December 4. Today I drive to Tulsa and board a plane for Boston. To supplement my lesson with Leonhardt, I have arranged a visit to the Cambridge workshop of William Dowd, who will build a harpsichord for me some time in 1971 or 72. Dowd's shop is in a district of light industry near the Charles River. I climb four flights of narrow stairs to the top floor. (How do they get the finished instrument down?) The walls of Dowd's small unpretentious office are covered with posters and programs of concerts by prominent artists who use his instruments. Dowd, in his early forties by my guess, is tall, stocky, sardonically humorous. He is pleased

to see me and I find him very congenial. "I prefer to build for someone I have met, and about whom I know something," he explains. With five assistants, Dowd builds twenty-five to thirty harpsichords a year. He regrets the long delay in delivery (now estimated at two-and-a-half years) but knows of no way to avoid it. "If I expanded my operations, I would become an office manager instead of a harpsichord maker."

We tour the shop, and observe some of the early steps in the construction of a harpsichord; keyboards laid out by silkscreen on a wood block; an open case displaying the ingenious bracing found in French Baroque instruments. Dowd bases his designs and construction procedures on Baroque models, not for antiquarian reasons, but because he feels that the harpsichords of the best Baroque builders — like the Italian violins of the seventeenth century — have never been surpassed in their musical qualities.

Until recently Dowd used metal registers, but now he has turned to wood box-slides with a leather cover. For jacks and plectra, however, Dowd does not disdain the superiority of modern materials. In 1959, Dowd and Frank Hubbard (then partners) pioneered in the use of extruded Delrin for plectra; in 1964, Dowd introduced his molded Delrin jack "The physical characteristics of extruded Delrin are considerable unlike those of the same material when molded." Dowd sees in Delrin the culmination of a long search for a satisfactory plectrum material. Baroque builders used bird quills for plectra, but this is a limited option for the twentieth century, due to the short life of the material as well as to objections from the Audubon Society! (As an enthusiastic amateur ornithologist, Dowd might feel some qualms about any further depletion of the raven population.) Some modern builders use hard leather plectra, but these, Dowd feels, do not produce the authentic tone quality of quill. Nylon and other plastics are more satisfactory, but they are prone to early failure after repeated plucking, due to

structural fatigue. An industrial chemist visiting Chambridge for the meeting of a scholarly association brought a sample of Delrin to Dowd and Hubbard. They shaped it into a plectrum, inserted it in a jack, and found the tone to be excellent. "Then we rigged up a simple testing device, a wheel with an eccentric cam that caused the Delrin plectrum to pluck a string rapidly and repeatedly many times per minute, set it in motion with an electric motor, and left the shop for the night. When we returned the next day, long past the expected failure time, the Delrin plectrum was still in perfect condition."

From early stages of construction we turn to three harpsichords that are completed or nearly so. Two are based on a 1730 design by Blanchet, the third on a 1770 Pascal Taskin. The differences are not great. "After all," Dowd points out, "both designs were produced by the same firm of makes, just forty years apart." In tone, however, a distinct difference can be perceived. Both designs produce superb harpsichords, but the Blanchet instruments possess a slightly cold, dark magnificence, while the Taskin model is warmer and more sensuous.

One of the Blanchets before us is obviously Dowd's pride. He is making it for Ralph Kirkpatrick. I play it, and am aware at once of its sparkling clarity of tone, very close to the quality of the few historical instruments I have heard. Dowd admits that he feels that with this harpsichord he has approached his goals more closely than ever before. The original Blanchet on which it is based is owned by a friend in the Boston area. When the time comes for final voicing of the new harpsichord, Dowd is going to place it beside its historical prototype for the closest possible comparisons.

More than three hours have passed swiftly, and it is almost time for my appointment with Gustav Leonhardt. Dowd puts me on a rapid transit bus to Harvard Square and I find my way through the busy campus to the Harvard University music

building. Leonhardt welcomes me in the modest, dimly-lit studio that the University has made available to him and we proceed to work on some of the thornier style problems of the French clavecinists. As in Dallas, Leonhardt's strongest intent is to make harpsichord playing expressive. "What the harpsichord plays is music," he says to me, "and all music contains nuance; so, the harpsichordist too must find a way to create nuance at this instrument." All possible means are to be utilized to this end; the small but definite amount of tonal inflection that can be controlled by the harpsichordist's finger technique; the use of agogic or rhythmic inflection for expressive purposes; and the subtleties of articulation. A tiny breath before a note creates the suggestion of an accent, the brief blur of a fleeting *legatissimo* hints at the effect of *decrescendo*. Leonhardt urges me to consider more clearly the underlying framework of metric pulse accents. "The Romantic piano styles of the nineteenth century may have obscured these to some extent, but for the Baroque composer the existence of what he called 'good' and 'bad' pulses was very real." Rhythmic counterpoints and the varied placement of harmonic tensions and melodic shapes will always, in the hands of a skillful composer, prevent the metric skeleton from causing the music to sound pedantic. Unceasingly, the harpsichordist must search for the expressive meaning of the music he plays, and communicate this to his audience.

This time, too, passes rapidly; soon I am on an airplane returning to Oklahoma. It is the Saturday afternoon lull for the airlines. The passenger list on my flight is scarcely larger than the crew. Some travels are still ahead of me — to Chicago again in the Spring, and then to Houston and Winston-Salem for my concerts. Soon after that, my sabbatical year will be at an end, my gestation period as a harpsichordist will be over, and I will return to the daily life of a university professor.

Victor Wolfram

The Harpsichord — 9

This 2-manual instrument is an excellent example of a competently made instrument produced in the early years of the harpsichord revival. While we may now look back at this instrument and readily see errors in judgement of construction, it presents us with an accurate look at what builders were doing at that time.

The instrument was made by Carl A. Pfeiffer at Stuttgart, Germany in 1909 and was acquired by Smithsonian Institution just 12 years later on March 26, 1921. The case is veneered in dark red mahogany and is ornamented with rather curious brass decorations. The figures stem from basic Greek and Roman styles but with a hint of Egypt thrown in.

Pfeiffer copied this instrument (with changes) from a two-manual harpsichord (No. 316) in the Musical Instrument Collection of the Staatlich Institut für Musik forschung in Berlin. The original was, for many years, attributed to Gottfried Silbermann and was believed to have belonged to Johann Sebastian Bach. Neither of these beliefs can be supported by solid evidence. Frank Hubbard, in his book *Three Centuries of Harpsichord Making* describes this instrument and the mystery around it in three pages devoted to the Bach Disposition. (pp. 330-333). Raymond Russell wrote on page 108 of *The Harpsichord and Clavichord*, "It will be seen that this tradition is based on fantasy, and that there is no evidence on which to assume that this harpsichord, now at Charlottenburg, belonged to J. S. Bach. Nothing seems reliable in these accounts apart from Rust's original and uncoloured statement. There have been unfortunate repercussions from this display of poor scholarship, for modern German harpsichords have almost always been designed on the lines of the spurious Bach harpsichord, and are inconveniently exceptional in having the four foot on the upper keyboard. Let this be a lesson to us."

This is certainly not a precise copy of the Berlin instrument since it is much more heavily constructed and the scalings are somewhat different from those of the Berlin instrument.

The range is from FF to f3. There are four sets of strings and jacks. 1 x 16', 2 x 8' and 1 x 4'. There is a buff stop and a shove coupler. When the shove coupler is used, the entire upper keyboard is pushed into the instrument a short distance which then couples the upper keyboard with the lower. The upper keyboard still plays only the stops assigned to it, but the lower keyboard sounds all the stops for the lower keyboard as well as the upper. This type of coupler was popular on many instruments during the 1700's. This arrangement made the *plein jeu* or full harpsichord possible.

The upper manual activates an 8' choir, which can be buffed and a 4' choir. The 4' plectra point to the treble and the 8' plectra point to the bass. This is the reverse of the Berlin instrument which was examined by Hubbard.

The lower manual activates an unbuffed 8' choir and a 16' choir.

There are both pedals and hand stops. The pedals, from left to right, engage (1) 16' choir (2) lower 8' choir (3) upper 8' choir and (4) 4' choir. The hand stops operate as follows: (1) upper left, "forte 16'", this raises the dampers; (2) lower left "Coppel", which slides in upper manual when pulled out at same time as No. 4; (3) upper right 'Laute 8'', the 8' buff stop; (4) lower right "Coppel", see No. 2.

The overall dimensions (including mouldings) are as follows:

Length: 94½ inches (240.6cm)

Width: 38½ inches (97.8cm)

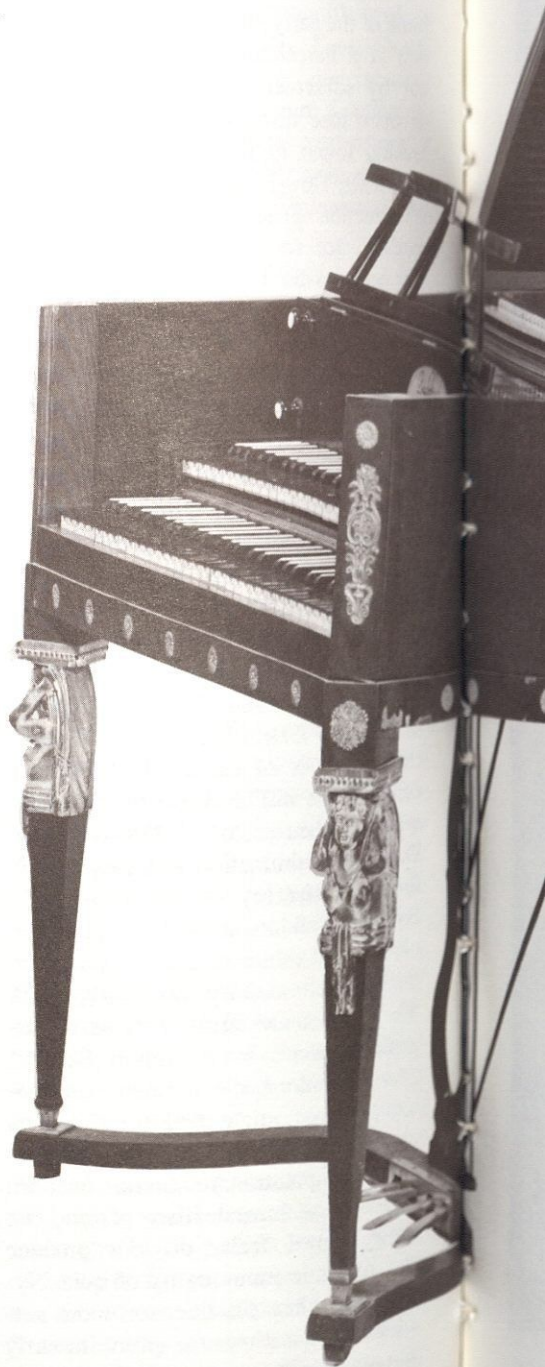
Depth: 12½ inches (31.8cm)

Sample 16, 8 and 4 scale length and plucking points follow:

f³, 16' choir, scale 8¾", plucking point 6¾". f³, 8' choir (shorter) scale 4 9/16", plucking point 3 3/16". f³, 4' choir, scale 2½", pluck-

ing point 13/16". c², 16' choir, 15 15/16", plucking point 7 1/16". c², 8' choir (shorter) 11 15/16", plucking point 4 5/16". c², 4' choir, scale 6", plucking point 1 11/16". FF, 16' choir, scale 72¾", plucking point 8½". FF 8' (shorter) scale 70⅝", plucking point 7⅛". FF 4' scale, 52 3/16", plucking point 4⅛".

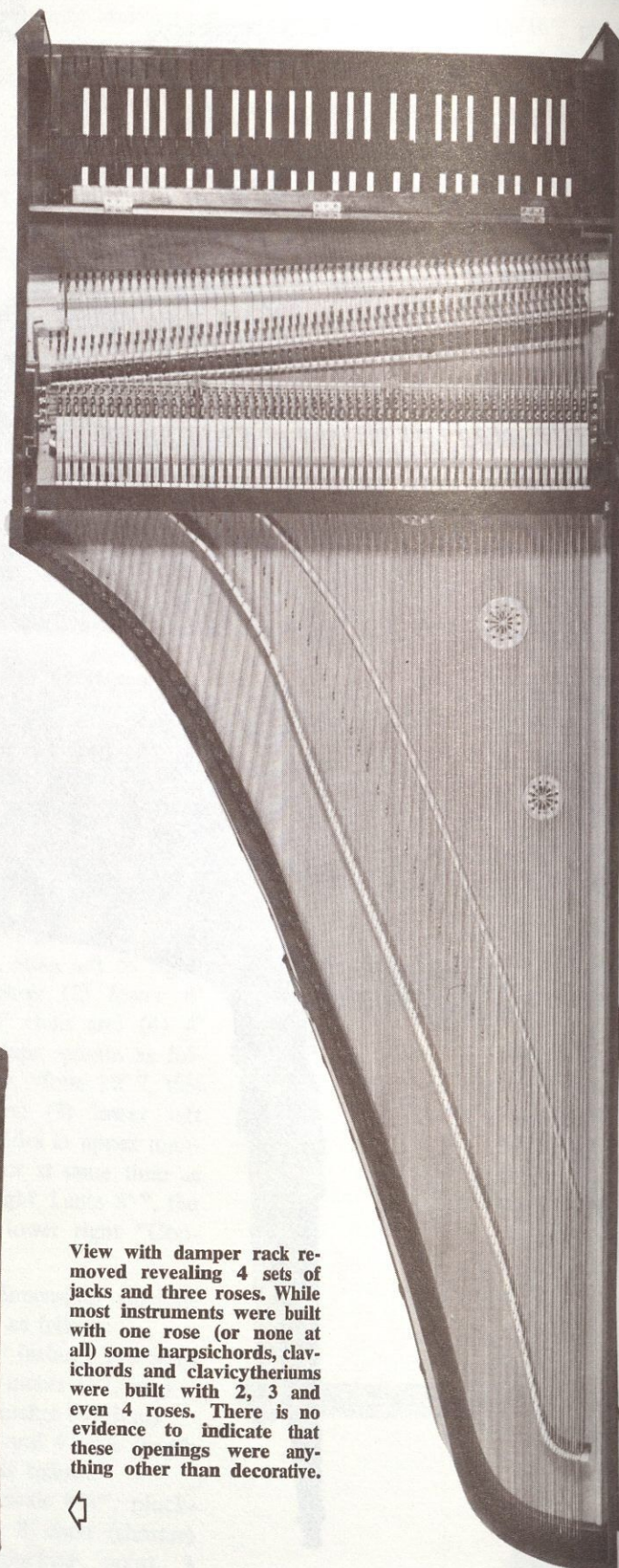
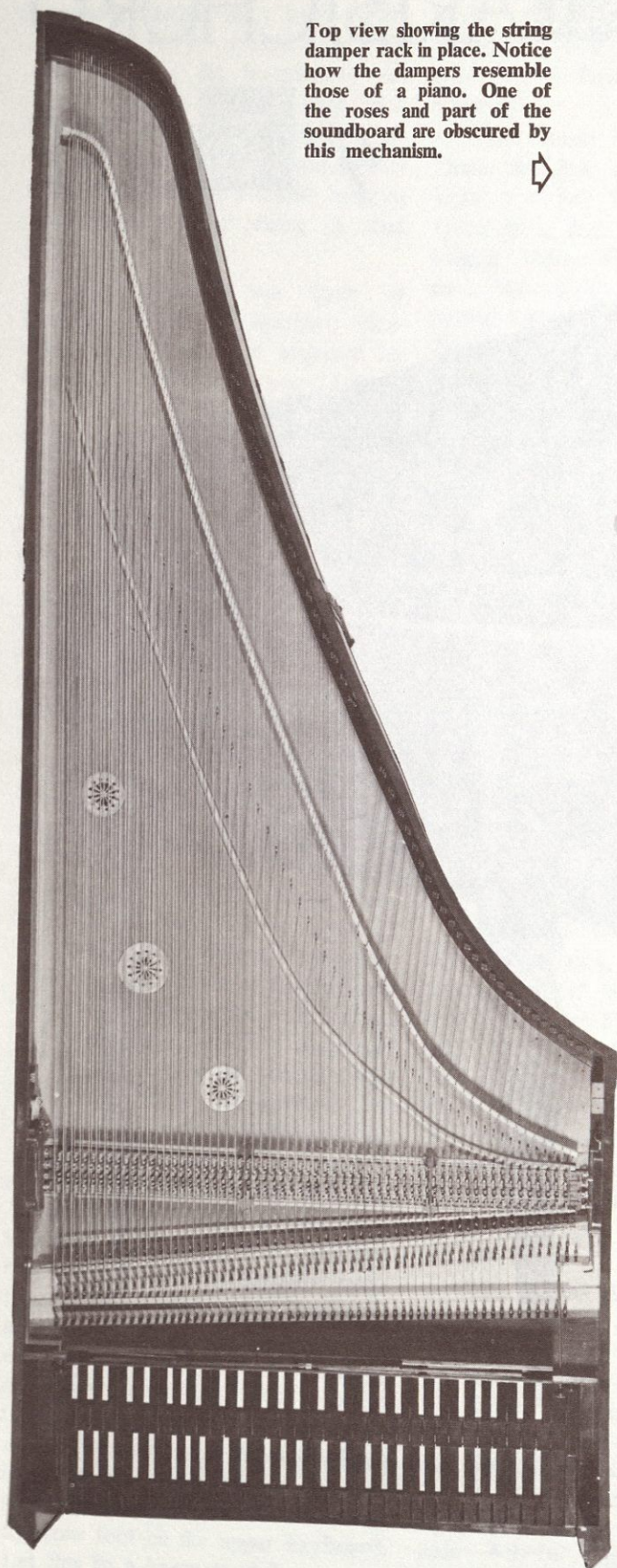
The instrument is unplayable but is in basically good condition structurally and cosmetically.



ARPISCHORD *of* OTE



Top view showing the string damper rack in place. Notice how the dampers resemble those of a piano. One of the roses and part of the soundboard are obscured by this mechanism.



View with damper rack removed revealing 4 sets of jacks and three roses. While most instruments were built with one rose (or none at all) some harpsichords, clavichords and clavicymbals were built with 2, 3 and even 4 roses. There is no evidence to indicate that these openings were anything other than decorative.

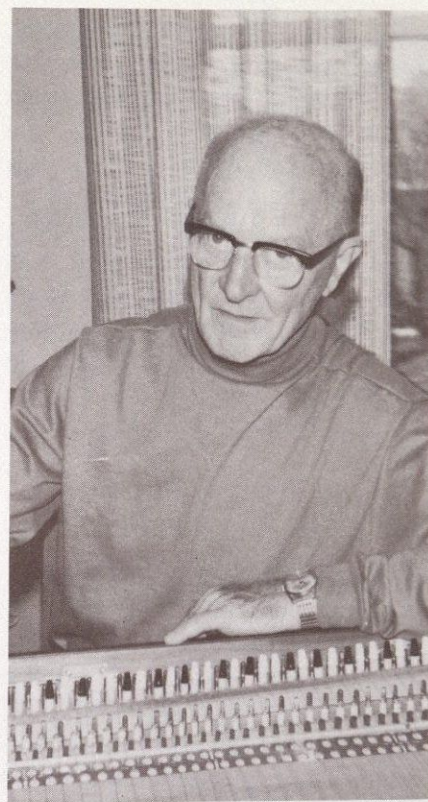
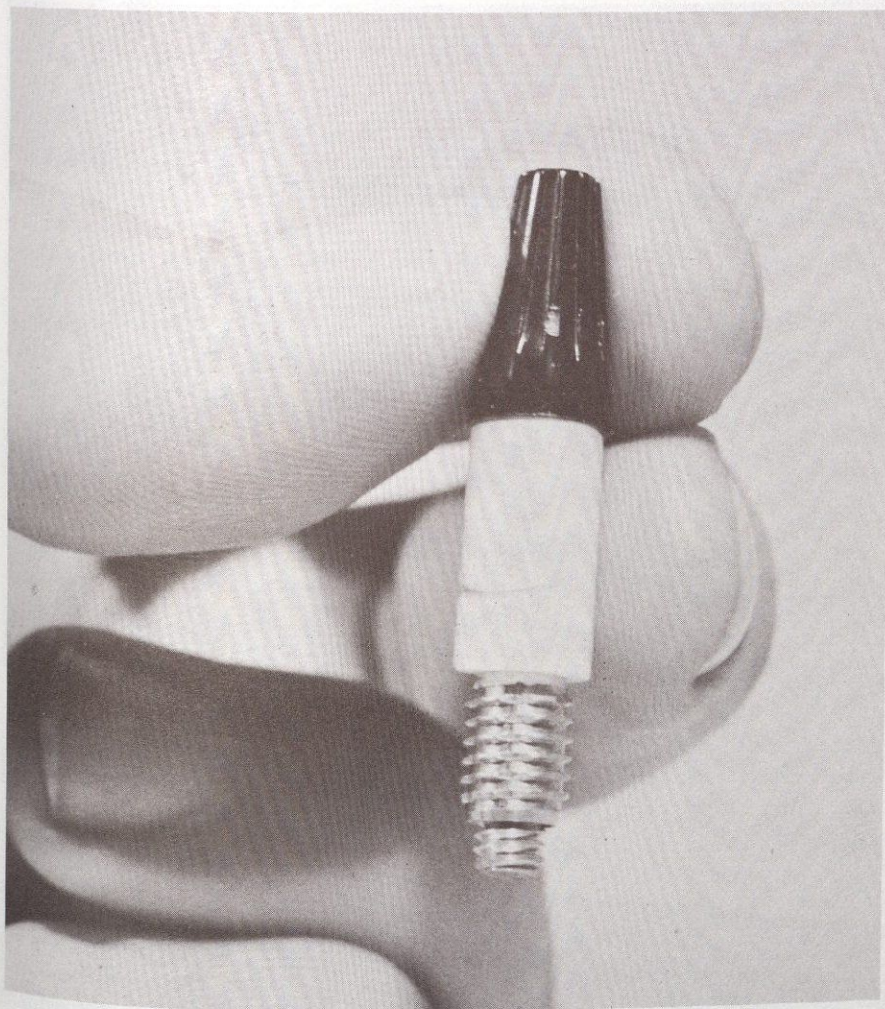


FAHRENBACH MICROTUNER MAKES TUNING MAINTENANCE EASY

According to the letters most often received by the Society, the two most difficult problems in owning a harpsichord are (1) tuning the instrument and (2), keeping the instrument in tune. The problem of tuning has been covered by Dr. George Sargent and his series on tuning (plus an additional article in this issue by Don Galt on tuning with a metronome), but the question of keeping the instrument in tune has gone unanswered until now.

About two years ago we learned that an engineer in California, Dr. Wolfgang Fahrenbach, had invented and perfected a device which was designed to solve this problem. We found Dr. Fahrenbach to be an exceptionally kind and cooperative man with a desire to help other harpsichordists and builders. He sent us samples of his invention, the Fahrenbach Microtuner, specifications, instructions and, finally and most generously, turned over the patent rights to the Society. We are happy to pass the information on to all builders who want to improve their instrument. Professional builders must contact the Society for special arrangement if they should want to use the Patent Pending Fahrenbach Microtuner commercially. As requested by Dr. Fahrenbach, any and all profits from the sale of Fahrenbach Microtuners must go to the International Harpsichord Society.

The harpsichord is a machine. And like most machines it gets out of adjustment by degrees. It almost never happens all at once. Machines must have maintenance to keep them "in tune" . . . and so must harpsichords.



One of the difficulties in keeping a harpsichord in tune starts with the tuning wrench. It is a crude tool at best.

The second problem is the tuning pin and the pin block. In most cases, the pin block is of wood which grabs the pin so tightly that it is almost impossible to give the pin a minute turn. The pin grabs, you apply more pressure to the wrench, then the pin releases and turns too far. This is the most poorly designed part of the instrument, and yet infinitesimally small variations are required to get the exact tension needed to create the perfect pitch you want.

The Fahrenbach Microtuner does not eliminate the tuning pin . . . it bypasses it. And in addition, it puts the tuning wrench in its place where it belongs . . . as a rough tuning aid. The tuning wrench and pin are used only for the first rough tuning, then the Fahrenbach Microtuner takes over.

How It Works

The pitch of a string is fundamentally controlled by the tension of the string. (We won't get into a discussion of string length and diameter

here.) The Fahrenbach Microtuner changes the string tension smoothly with the precision of a micrometer and without additional tools. Extremely minute changes in tension (pitch) can be made by simply turning a knurled regulator cone located on the tuner which is attached to each string. The tuning wrench is used only when replacing a string or when it is necessary to bring a string up to pitch that has gone wildly out of tune due to a slipped tuning pin, a string loop or something of that nature.

The Fahrenbach Microtuner consists of only four parts as shown in illustration A. (1) a metal screw (2) an insert nut (3) a slotted Delrin sleeve and (4) a plastic regulator cone. A tuner is attached to each string (except, in most cases, the bottom octave between the tuning pin and the wooden nut holding the string against the nut pin (See illustration B). There is a slight side pressure

against the string which holds the string firmly against the nut pin and keeps the tuner bolt from slipping in the insert nut. The string is held under tension by the slotted Delrin sleeve.

When the regulator cone is turned to the right, it moves the Delrin sleeve, which is holding the string, down toward the pin block. This increases the tension of the string and raises the pitch. Turning the regulator cone to the left, raises the Delrin sleeve, decreasing the tension and lowering the pitch. The great advantage is that these changes in pitch can be done instantly and minutely, with only the fingers. If one note seems a little "ripe", it can be accurately freshened up at once so your instrument need never be out-of-tune again.

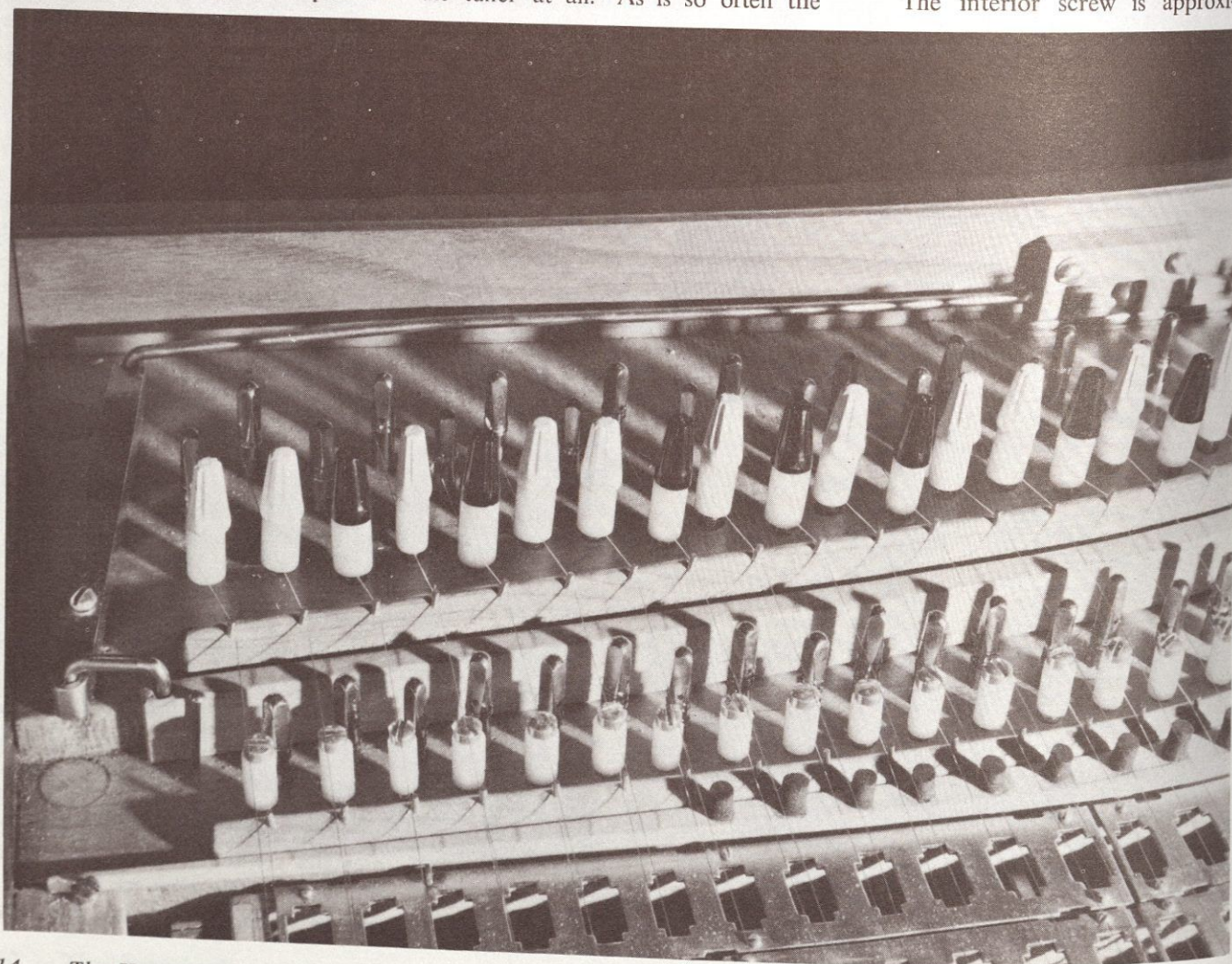
Not all instruments, or all choirs of strings, can use the Microtuner. Some spinet designs preclude using the tuner at all. As is so often the

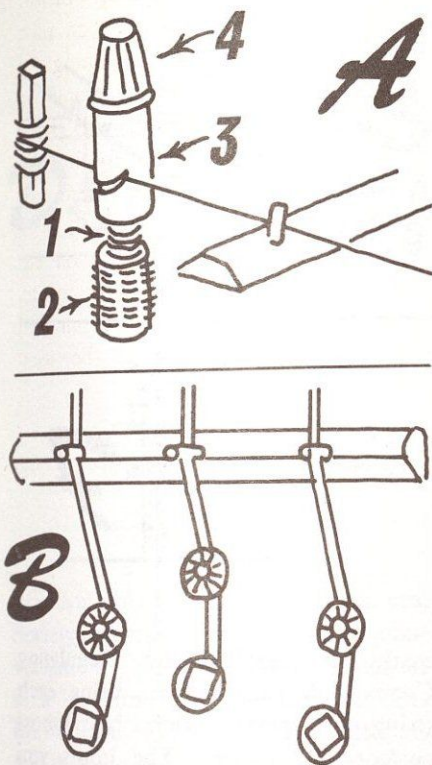
case, space is the deciding factor. There must be at least half an inch of open space between the tuning pin and nut and, ideally, there should be more. Most instruments will have plenty of space, especially in the middle and upper registers where tuning is most difficult and critical. You may run into a little trouble on the bottom octaves of some instruments, but here tuning problems are minimal and a tuning wrench can be used when necessary.

How to Build A Microtuner

Building and installing the Fahrenbach Microtuner is not difficult. While it is somewhat time consuming, you will never regret the time spent, for it will save you untold hours of tuning frustration.

The interior screw is approxi-





mately 1 1/4 inches long and 1/8" thick. It is cut from a continuous rod which is available at most hardware stores in three-foot lengths for about 50c a length. You can cut it with a hacksaw or an electrician's bolt cutter. (The length of 1 1/4 inches is approximate since different instruments may require longer bolts. In order to determine your special needs, you should make one complete Microtuner, test it, and fashion all the rest after your test model.)

The bolt is then screwed into the plastic Regulator Cone which is made from an electrician's wire nut. These wire nuts are made by various companies, but the ones we have used are manufactured by Ideal Industries, Inc. Sycamore, Illinois. (In Canada they are made by IDA Electric, Ajax, Ontario.) The model number is 71B. If you are near a wholesale electrical supply house, you might be able to get these wholesale for as little as \$1.50 for a box of 100. Don't be too surprised, however, if they won't sell them to you. We had a terrible time convincing a large wholesale house here in Denver that we were not violating some law by purchasing the wire nuts. They kept insisting that we had

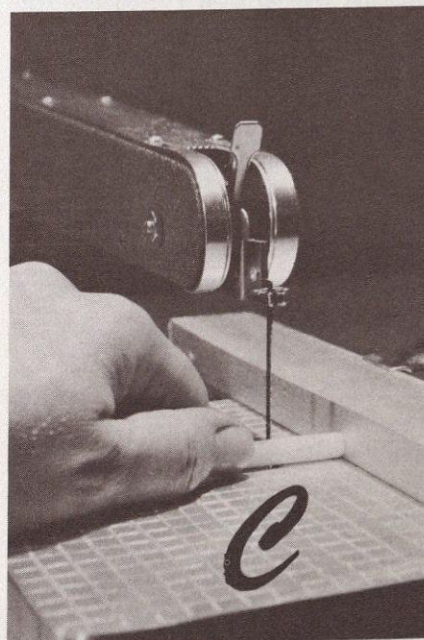
to buy them from a licensed electrician who would then install them for us! It was only after showing photographs of a harpsichord and a drawing of the Fahrenbach Microtuner installation that we were able to make a purchase. Even then the salesman was sure he was doing the wrong thing by letting us have them at all. There are wire-nuts available both in black and white, yet the white variety seem to be very difficult to find. When we suggested to the electrical supply house here that we probably could write to the factory for the white wire nuts, we were told that we could write as many times as we pleased, but if they didn't order them at that particular outlet, there was no way in the world we could get them. We finally collected our white nuts by digging through a box of scrap parts at another supply house.

Now, assuming you have obtained the wire nuts and the center bolt, squeeze some Duco cement into the nut before screwing in the bolt. Be sure the bolt is screwed in firmly. The Duco will help keep the Regulator Cone from backing off when you are turning counter-clockwise. It wouldn't be a disaster, but you don't want the Regulator Cone coming loose after the installation is complete.

Next come the Delrin spacers. They measure 5/8" in length and are cut from 5/16" round Delrin rods available from a plastics supply house. If you can't find Delrin, Nylon will do, but Delrin is stronger and holds up much better. There is an additional problem with Nylon in that it has a tendency to melt and can even weld itself back together again, while Delrin machines and finishes very well. The rods come in 10' lengths and can be purchased by the foot. The price is about 50c per foot for small quantity purchases (under 10 feet.)

Delrin can be cut by hand, but if you have a band saw the job is much easier and faster. We used a jig saw (see photo C) and while it was faster than cutting by hand, we had a little problem with getting a ma-

chine-smooth edge. It is important to use a metal cutting saw blade with very fine teeth. A blade for wood just will not do a good job. We've tried it. The plastics company told us that you should use a very fast speed on your saw and, if possible a carbide blade. They use a carbide blade on a circular saw, but of course you lose a great deal of Delrin that way because of the thickness of the blade. Photograph C shows a jig saw being used with a fence to assure cutting the exact length needed. Delrin does not cut like wood. It is more dense in structure and harder to cut,



so it will take a little practice. If you rotate the Delrin a little just before you cut all the way through, you will almost eliminate a burr from forming on the edge of the cut.

Next drill a hole lengthwise through the Delrin, just slightly larger than the inside center bolt. This spacer must be able to move freely without binding. It's important to note that the hole should be somewhat off-center (put parallel to the sides) so that the string slot will have more space and not bisect the center bolt. (Illustration G) Delrin is not easy to drill, so your drill should be sharp or you'll find it taking forever to cut through. Also a dull drill will heat the plastic to quite a high temperature. While a drill press is not a must, you

will save yourself a lot of time and worry if you have one. A hand-held drill cuts beautifully but unless you are very experienced, it has a tendency to cut a little bit off the absolute vertical. A small vise or jig is absolutely required for drilling these pieces, whether you use a drill press or hand drill. (We've tried everything and there is no other way.)

The slot is now cut into the side of the Delrin. This can be done either with an electric saw or hand saw with standard jig saw blades. If you use an electric jig saw, you must clamp your work down tightly in a movable vise to keep it from chattering, or rotating and ruining the piece. When cutting the string slot, be sure to cut into the side furthest away from the off-center hole you drilled. Try not to cut in as deeply as the hole. You want the string to be supported only by Delrin. If you cut in too deeply, the string will ride against the sharp threads of the center bolt and your string life will be shortened.

At this point the Delrin should be buffed or polished on a buffing wheel to remove all burrs and excess material which may be still attached. The finished piece should be very smooth and without sharp edges. Do **not** put polishing compound on your buffing wheel. It does not seem to do anything extra to Delrin but discolor the plastic and make it look unsightly. The clean, ivory-white color of Delrin is beautiful and should remain that way.

The last part, the insert nut, is available in quantities from the manufacturers, Tridair Industries, Fastener Division, 3000 W. Lomita Blvd., Torrance, California 90505. It is a stock item and sells for about 10c each in quantities of 1,000. Lesser quantities should be available at local retail stores.

Installation

For properly locating the Fahrenbach Microtuner, the following procedure should be used. (1) Cut a block from hardwood which will fit between the strings and rest on the

pin block. (See illustration E). (2) Drill a 3/32 inch hole approximately 3/32 of an inch from the side of the hardwood block. (Illustration F). Use this as a jig. (3) Set the block against the string. (4) Place a sharp nail in the 3/32 hole and give it a **light** tap so that it marks the pinblock. (Remember, here you are just **marking** the location of a hole . . . you are not making it. Too hard a tap could split your pinblock and then you'd be in the soup.) (5) Loosen one string after the other and (6) drill the hole for the insert 1/2 inch deep, holding the loose string out of the way. (7) The insert nut is then screwed into the pin block by using a regular screw with two lock nuts. That's all there is to it.

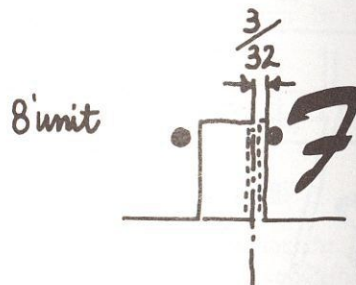
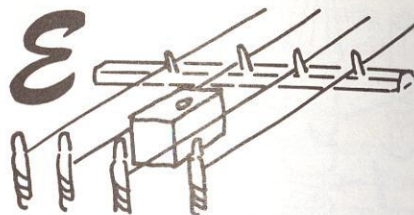
Needless to say, do not touch the pin block with a drill until you have made and assembled a Fahrenbach Microtuner and installed it in a piece of scrapwood. This is extremely important. It gives you practice and a chance to check all your materials. Your pinblock is the most important and complex single piece of wood in your entire harpsichord and you want everything which goes on it, or in it, to be absolutely perfect.

In the event you have 4' strings which are attached to the lower level of a 2-level pin block (some Zuckermann instruments use this system) it may be necessary to use slotted screws in place of the Regulator Cone since the Cone may interfere with the 8' choir of strings. (See illustration D).

Using the Fahrenbach Microtuner

This is the easiest part of all. The hardest part is recalling the wasted hours you have spent trying to keep your instrument in tune with a tuning wrench, (which is somewhat like trying to adjust a fine watch with a pair of household pliers.)

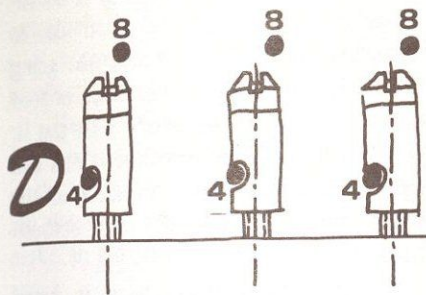
If your instrument is just being tuned for the first time, bring it up to pitch with a wrench, but err slightly on the flat side. Next, put your wrench away. Then, smoothly and



easily, by turning the Regulating Cones with your fingers, bring each string up to perfect pitch. Not almost perfect, but perfect. The hours you used to spend bouncing back and forth from sharp to flat trying to get everything to come to rest on pitch are over. Now you dial the pitch quickly, easily and accurately and it stays there. One of the great tragedies produced by the tuning wrench was the fatigued strings it created. Strings would have to be overstretched, and then released to "set" the pin. If the "set" brought the pitch below the desired note, this same string-torture had to be done all over again. If all the strings that have been broken because of this undue stretching were brought together you could build another Golden Gate Bridge! With the Fahrenbach Microtuner the string tension is applied smoothly and evenly. The tuning pin stays locked in the pin block where it belongs . . . and you are released to spend your time playing an instrument which is probably in more perfect pitch than it has ever been before.

Availability of Completed Microtuner and Kit

It has been brought to our attention that, while all the materials to build the Fahrenbach Microtuner



are available from various sources, Society members might find it convenient to purchase these materials in a kit form from the Society. The kit would include all the raw materials and detailed instructions on fabricating and installing the Fahrenbach Microtuner. Other members, who do not have power tools (or perhaps the time to use them) might want to purchase completed tuners which are ready for easy installation and require only a hand drill, (for drilling the pin block), a screw driver and a short evening of time. We have planned to make these items available if enough members are interested.

We have not started ordering the materials, or making up the kits since we have no way of knowing what the demand for this service would be. Naturally, the larger quantities of materials we can buy at one time, the less the cost, but using the roughest of rough figures, we believe the kits would cost about 20c per string and the completed Fahrenbach Microtuners, complete and ready for installation would be about 35c or so per string.

If you might be interested in either the kit or completed Microtuners, please drop us a note or post card telling us how many strings you would like to cover and whether you would be interested in either the kit or completed tuners. This first response does not obligate you in any

way. After all responses are in, we will notify you directly with firm prices, delivery times, etc. You may then order if you wish. If there are not enough responses to make bulk buying possible, we will notify you of that also. Send all replies to Fahrenbach Microtuner, International Harpsichord Society, P. O. Box 4323, Denver, Colorado 80204. ☺

BACH COMPETITION OFF LIMITS

(continued from page 3)

was the limiting factor in the competition.

We wrote to Miss Tselentis and asked her to tell us why harpsichords were not permitted in her Bach competition. We discovered that she has a deep love for both the harpsichord and 20th century piano and her competition has been honored to be judged by such recognized harpsichord talents as Denise Restout and Albert Fuller. This even deepened the mystery. Then we discovered the culprit . . . money. Miss Tselentis told us that she would like very much to include harpsichords but "funds have been offered to us only for a piano competition featuring the works of Bach." We have learned that funds come from the U. S. National Foundation for the Arts and Humanities (a grant), the West German Government (a fellowship), Mr. and Mrs. David Lloyd Kreeger of Washington who generously donate the prize monies and Eugene and Agnes E. Meyer Foundation, also of Washington who, for many years, have provided the other funds necessary to execute such a project. These people are to be commended for their selfless enthusiasm and assistance. Miss Tselentis is to be especially recognized for the many years of hard work she has invested in this important competition. We do feel, however, that to be completely honest and not misleading, the name Johann Sebastian Bach International Competitions" should be changed to "International Piano Competitions Featuring the Works of Bach".

Hal Haney

JACKS OF ALL MAKES MASTERPIECES NONE

(continued from page 3)

the new Schutze jack in which the axle is formed by a moulded-in shelf fitting into a corresponding slit in the jack body, are the leaders here. In both jacks, tedious assembly time is saved.

5. **Distance from axle to plectrum.** This should be no more than 1/2" for maximum ease of repetition. If it is more, the tongue flips out too far and takes too much time to return.

6. **Moulded-in tongue spring.** This eliminates tedious assembly of wire springs.

7. **Adaptability.** Each jack should be easily acceptable to both leather and plastic quill. A good jack should have both a slit for separate plastic quill and a square hole for leather.

8. **Tail extension.** It is wise to have a square tail extension for allowing the tail itself to slide through a round hole in the lower guide rather than be forced to use end pins. This means ordinary screws can be used for end adjustments. Possibly the same screws as the adjustment screw could be used.

9. **Jack horns.** This is a projection at the top of the jack to allow room for a screwhead rather than the more difficult to use, headless set screw. Headless screws are both hard to insert and hard to adjust.

10. **Breaking sharp edges.** All corners and edges should be rounded so as not to make scraping contact with the slide cut-out.

11. **4' extension.** Jack should have at least 3/8" more body at the top than necessary, which can be cut off for the 8', so that no stepped jack rail is needed in a larger instrument.

12. **Jack body material.** All basic material for the jack body should be of light colored material so it can be numbered and marked.

I think, on the whole, jack design is lagging behind the instruments themselves. My own jack was designed many years ago and is more

(Continued on page 19)

MEANTONE TUNING WITH A METRONOME



During our search for helpful harpsichord information, we learned of a unique system of tuning the mean tone scale which uses a metronome. The system was invented by Don Galt, Technical Editor of the *Piano Technicians Journal* and first appeared in that publication (January-February, 1970). We immediately asked for, and received, permission to pass the information on to you for your use. The system is called "Aural Meantone Tuning" and requires only that you be able to count beats accurately. Mr. Galt gives beginners encouragement when he says; "The beat rates involved are easy to hear and to match to the metronome. I can promise that this aural-metronome procedure, carefully followed, will produce a beautifully tuned meantone scale."

This tuning gives equal access to the major keys of B flat, F, C, G, D and A along with their relative minors. There are not enough keys on the keyboard to provide the additional notes that would be needed beyond these six majors and minors.

Dr. William Braid White's book *Piano Tuning and Allied Arts* mentions meantone temperament and suggests that piano tuners should know how to tune meantone. He wrote; "The meantone temperament ought to be kept alive if only that it was the temperament of the classical age of music, furnishing the intonation which they had in their ears when they were writing their works. Men of that era would have been horrified at the thought of considering the musical scale to be of 12 equal semitones."

If you have an electronic metronome with a volume control, or a flashing light, the tuning will be somewhat easier since the quiet sound of the harpsichord is rather overpowered with the average "tick-tock" of a metronome. According to a recent series of tests made by a consumer research organization, the electric metronomes tested, did not (for some strange reason) have the accuracy of some spring wound models. If you want to test your metronome for accuracy, it is a simple process.

The numbers on the face of the metronome indicate the number of beats per minute. Set the indicator at the lowest number and, using a clock or watch with a second hand, count the number of ticks for exactly one minute. Test the instrument at several points in the middle range and then at the fastest setting to get a clear picture of the accuracy of your instrument. Don't expect your metronome to be precisely accurate. If it measures one beat too many or too few over a period of a minute, you can be very happy!

If you are going to buy a metronome (and it is really a good idea to have one even if you are not going to use it for tuning) take three or four extra minutes at the store and test it. If it's way off, try another. You can find differences with models of the same brand as well as between brands.

Mr. Galt's procedure is based on A-440, and the compass is from F33 to F45. As in equal temperament, tempered fourths are widened, tempered fifths are narrowed. Major thirds are beatless. The beat rates involved range from just under 1½ beats per second to just over 3 beats per second. They have been converted into metronome settings, all lying between 88 to 184 per minute, and beats are to be aurally matched directly to metronome ticks. Some settings shown actually do not appear on the average metronome, but these can be interpolated easily.

In the chart which follows, he has shown some beatless minor sixths to be used as checks. This is a strange sounding interval, and since it uses an eighth partial, it does not always beat clearly. If you find its use uncertain,

PROCEDURE FOR AURAL TUNING IN MEANTONE INTONATION USING METRONOME

Beats in fourths and fifths are to be matched to metronome ticks.

Step	Note to be tuned	Tune to	Interval	Beats/sec	Metronome setting
1	A37	Fork			
2	E44	A37	fifth up	2.06	124
3	B39	E44	fourth down	3.07	184
4	D42	A37	fourth up	2.75	165
5	G35	D42	fifth down	1.81	109
6	Check G35—B39 major third, beatless				
7	C40	G35	fourth up	1.46	88
8	Check C40—E44 major third, beatless				
9	F33	C40	fifth down	1.64	98
10	Check F33—A37 major third, beatless				
11	B ^b 38	F33	fourth up	2.20	132
12	Check B ^b 38—D42 major third, beatless				
13	E ^b 43	B ^b 38	fourth up	2.92	175
14	Check G35—E 43 minor sixth, beatless				
15	F [#] 34	B39	fourth down	2.24	134
16	Check F [#] 34—D42 minor sixth, beatless				
17	C [#] 41	F [#] 34	fifth up	1.73	104
18	Check A37—C 41 major third, beatless				
19	G [#] 36	C [#] 41	fourth down	2.56	154
20	Check G [#] 36—E44 minor sixth, beatless				
21	F45	F33	octave	zero	

tune the octave of one note or the other, which will give you the inversion, a major third, which should be beatless.

Have patience, listen to the beats (the metronome indicates the speed of the beat) and you should be enjoying the new sound your harpsichord makes in no time at all.

WHY I PLAY "ORGAN MUSIC" ON THE HARPSICHORD

(continued from page 6)

Bach's own instrumental choice for the Trio Sonatas—as well as for several other works such as the Passacaglia and Fugue in C minor—may well remain a mystery of music history. Certainly some of Bach's music is equally at home on organ or pedal harpsichord, and in each case takes on an interestingly different character. A performer or listener will give his own verdict.

The pedal harpsichord by John Challis that I have been privileged to play for five years is an inspiration and a delight. For me it has provided invigorating reality and a new point of view to Bach's music, and one finds the instrument just as useful for practicing, say, the C major Sowerby Concerto with Orchestra.

The pedal harpsichord does present, however, one unexpected problem. I cannot yet persuade myself to leave the instrument, after practice, without the thought that haunts every organist at such a moment (or even worse, in the middle of the night)—did I switch off the blower?

E. Power Biggs

The John Challis pedal harpsichord has the following specification:

Manual I	Manual II	Pedal
16'		16'
8'	8'	8'
8'	Harp on 8'	4'
4'		Harp on 16' & 8'

Stop controls for the manuals are in the center below the lower manual.

Stop controls for the pedal are by four foot pedals. In addition, a pedal gives full harpsichord and pedal

without changing the setting of stops.

Another pedal controls a venetian swell for the pedal.

JACKS OF ALL MAKES MASTERPIECES NONE

(Continued from page 17)
than due for an overhaul.

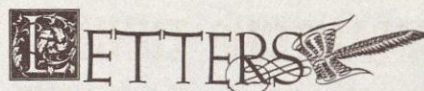
Frank Hubbard's jack has many shortcomings; there is a distance of $\frac{3}{4}$ " from axle to plectrum; there is a cumbersome damper and endpin system; the tail misses just by $\frac{1}{32}$ " being square and thus usable in a round guide hole; the recessed shelf against which the tongue spring bears is much too high, since only the end of the spring should bear against it.

The Dowd jack is much better but again has no square tail and a tiny recessed headless set screw.

Of the German jacks, the Neupert O. K. jack has a distance of only $\frac{3}{8}$ " between axle and plectrum and this seems to work well. Sassmann has a useful bulge in his tongue around the leather hole to prevent splitting the tongue under pressure of putting in the leather. Most of the German jacks have cumbersome wire springs and elaborate damping systems. Morley (of London) has a jack with two endpins to achieve a dogleg but a cumbersome spring arrangement.

Probably the best all around jack is the new Schuetze jack, which has been patented. It features the easy tongue insertion mentioned earlier, a built-in plastic spring, a round tail, and room for a screw head on the adjustment screw. But the most important feature, which is unique so far, is a separate moulded product made independently of the jack. This is a comb, containing moulded Delrin plectra of five graduated sizes, from the base to the treble, varying in width and thickness. In this way the voicer can choose the right plectrum for each note. I have tried his plectra and found them amazingly good with very little work. It is certainly the most intelligent attempt in modern times to deal with the voicing problem in harpsichords.

Wallace Zuckermann



Dear Mr. Haney:

Hugh Boyle's column on the Victoria and Albert Museum's collection (Vol. II, No. 3) left out some vital information, addresses and prices, of the catalogues and records. I believe that these are available in the United States from:

British Information Services
845 Third Avenue
New York, N. Y. 10022 USA

I have been pleased with *The Harpsichord* thus far and recognize that it is a big and trying job to direct both the Society and the magazine. There are some subjects that I would like to see receiving more attention in the magazine. The "Harpsichord of Note" column is interesting, but would be much more valuable if it included more details such as dimensions, stringing, plucking points, materials, structural layout, etc. Articles on current manufacturers and their products would also be useful. A series of "road tests" typical of the product evaluations given by automotive magazines would be ideal, although I realize that it would be difficult to get instruments, and the evaluations would be controversial. Perhaps it might be possible to publish **complete** descriptions of instruments including enough physical details that the reader would be in a position to judge the subject instrument.

I have been working on an adjustable tangent holder arrangement for my clavichord which I hope will be a major improvement. While I can't recommend the system to anyone else until I have a chance to thoroughly wring it out in my own instrument, I'll be pleased to submit a full description once I'm satisfied that it works.

Yours very truly,
Frank G. Munz
Lakewood, Ohio

Dear Mr. Haney:

Many thanks for your letter and the most recent issue of *The Harpsichord*. It did arrive, though it does take a little time between Denver and this remote spot.

I am enclosing the Who's Who sheet. I hope my suggestion under item 17 may be useful, but I am sure many other aficionados are as infuriated as I have been by 'doctored' editions. If one lived in Europe, or the States, and had good library facilities at one's disposal, that handicap would not be too great. But if one spends most of one's life in remote regions of the world, the difficulties are compounded.

My suggestion was partly prompted from having played a good deal of Rameau, and having recently heard a record of George Malcolm's — and while I could not compare my playing to his, there was equally no comparison between the score I have, and the one he was using!

I suggest that in view of the existence of many unreliable, 'edited' editions of 17th and 18th century music, the Society could perform a most useful service in establishing, over a period of time, a bibliography of recommended, scholarly editions of standard harpsichord music. (The case of the Longo and Kirkpatrick editions of Scarlatti is a blatant example!)

Viktor Furst
Zomba, Malawi
Africa

Dear Hal:

Always interested to get the new issue of *The Harpsichord* and find out not only what you have to say, but what the comments are from dozens of people all over.

An interesting development that you might note is a new model which Neupert has introduced, which will be called the model "Corelli". This is a harpsichord with 8¹, 8² and 4²,

much as our model Couperin has. However, the keyboard is a full five octaves, and the case is of a pedestal type with three pedals which will be 8², 4² coupler. The 8¹ stays in at all

times. The length of the instrument is seven feet, and the case is in baroque style, square front, the face-dash board lifting out and becoming the music rack when fit into the slot. Lovely baroque hinges and all, the instrument is a gem. I had the first model flown out to Los Angeles, where I was in late April and went over it completely with Bill Kasimoff, who agreed with me that it is a most necessary and desirable addition to our line, and unfortunately sold it right away. I have placed orders for more.

To some extent, considering the European dispositions and the 4½ versus the 5 octave keyboard, this instrument will satisfy the harpsichordist who likes the disposition followed generally by the Boston makers and I think it will be highly successful as well as much needed.

I am now off again to Europe and will be there for about a month and a half. As I travel about, I will keep an eye out for interesting finds, news, etc.

Sincerely yours
Theodore Mix
Magnamusic
Sharon, Connecticut

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